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(74) Agent: MERKEL, William, K.; Marshall, Gerstein & Borun LLP, 6300 Sears Tower, 233 South Wacker Drive, Chicago, IL 60606 (US).

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(71) Applicant (*for all designated States except US*): THE BOARD OF TRUSTEES OF THE UNIVERSITY OF ILLINOIS [US/US]; 352 Administration Building, 506 South Wright Street, Urbana, IL 61801 (US).

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(72) Inventors; and

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(75) Inventors/Applicants (*for US only*): DESAI, Tejal, Ashwin [US/US]; 50 Emerson Road, Wellesley, MA 02481 (US). TAN, Wei [CN/US]; 910 South Loomis Street, #3R, Chicago, IL 60607 (US).

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(54) Title: MULTILAYERED MICROCULTURES

(57) Abstract: A multilayer microculture capable of modeling complex *in vivo* structures such as mammalian tissues and organ structures is provided, along with methods for producing such a microculture and methods of using such microcultures for assaying for modulators of cell-cell interaction, cell migration, cell proliferation, cell adhesion or cellular or organismal physiology. Further provided are methods of identifying hazardous materials such as environmental toxins and pollutants (e.g., carcinogenic compounds), and methods of monitoring organismal physiology.

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